FIG. 1

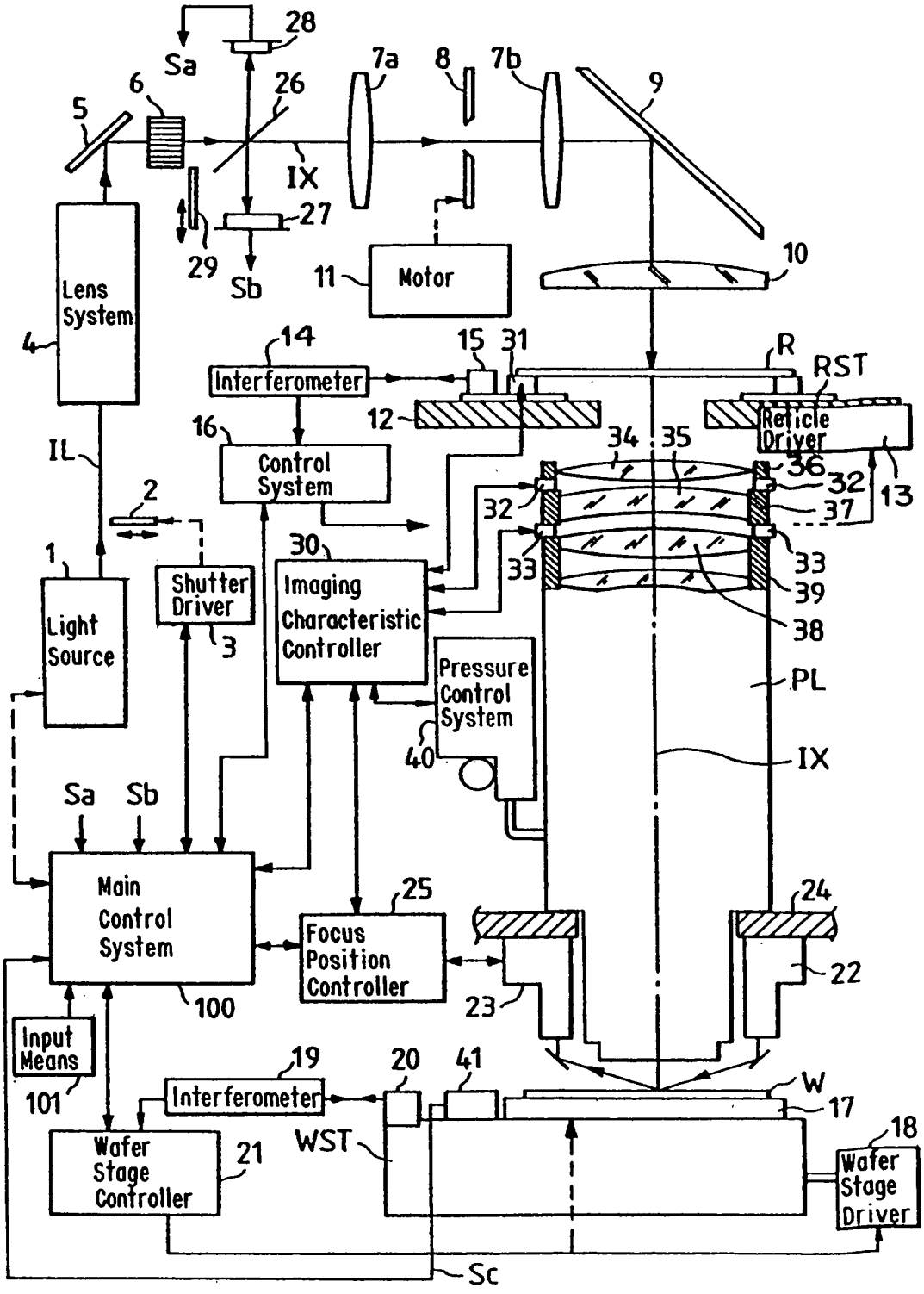

28
Sa
26
7a
8
7b
9
6
5
IX
27
29
Sb
11
Motor
10
Lens System
4
14
Interferometer
15
31
R
RST
12
Reticle Driver
16
Control System
34
35
36
32
13
IL
2
32
37
1
30
33
33
Shutter Driver
Imaging Characteristic Controller
39
Light Source
3
38
Pressure Control System
PL
40
IX
Sa
Sb
Main Control System
25
24
Focus Position Controller
22
23
100
Input Means
101
19
20
41
W
Interferometer
17
Wafer Stage Controller
21
WST
18
Wafer Stage Driver
Sc

FIG. 2

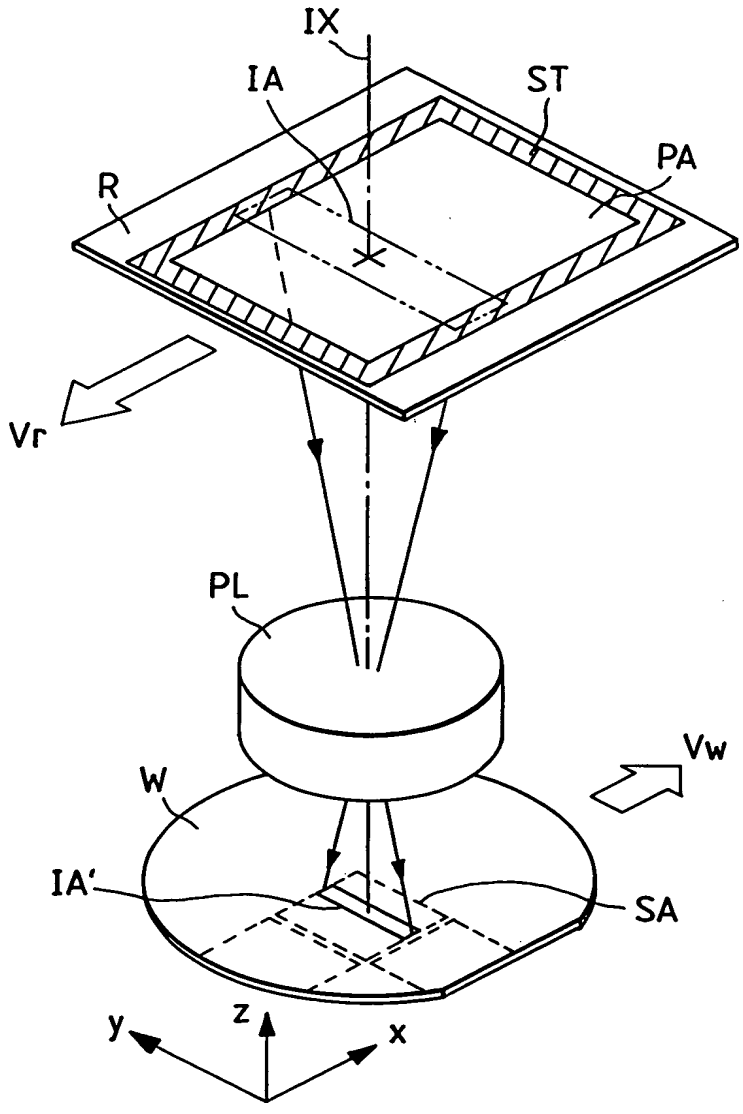


FIG. 3

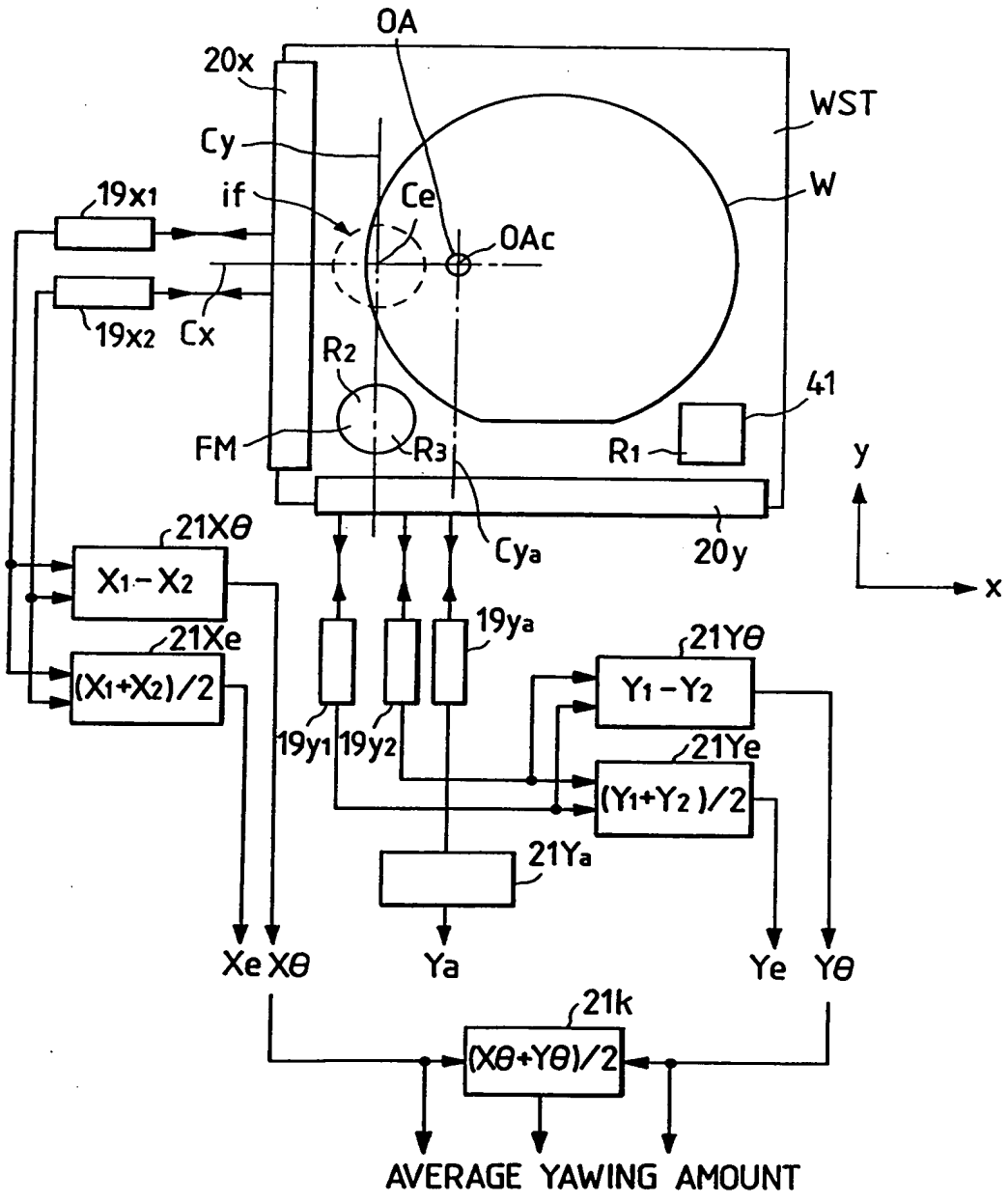

OA
20x
WST
Cy
W
19x1
if
Ce
OAc
19x2
Cx
R2
41
FM
R3
R1
y
21XΘ
X1−X2
Cya
20y
x
21Xe
(X1+X2)/2
19ya
21YΘ
Y1−Y2
19y1
19y2
21Ye
(Y1+Y2)/2
21Ya
Xe
XΘ
Ya
Ye
YΘ
21k
(XΘ+YΘ)/2
AVERAGE YAWING AMOUNT

FIG. 4A

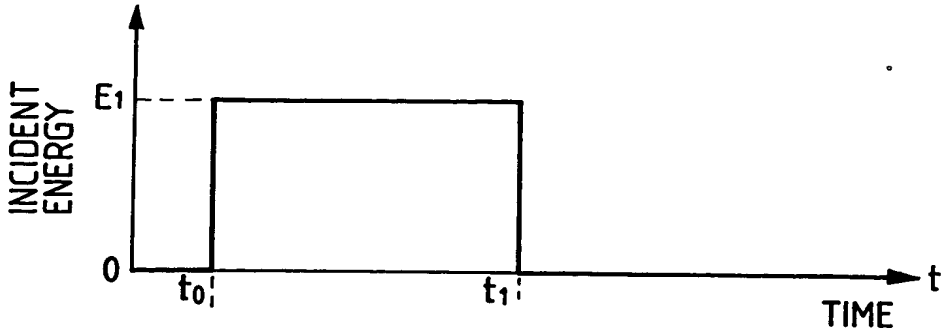


FIG. 4B

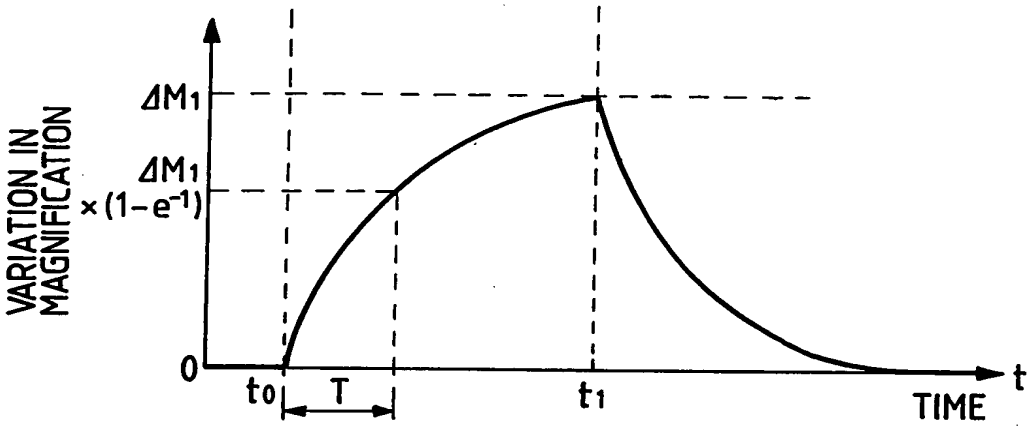


FIG. 5

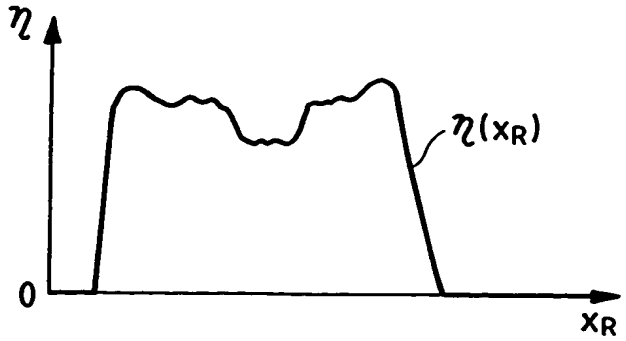


FIG. 6

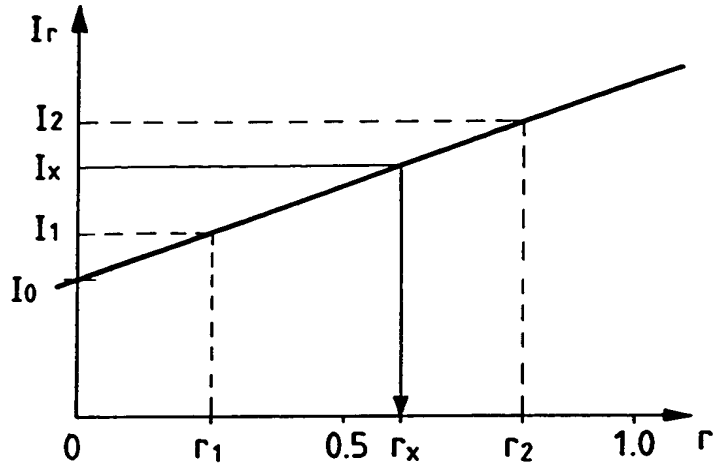


FIG. 7A

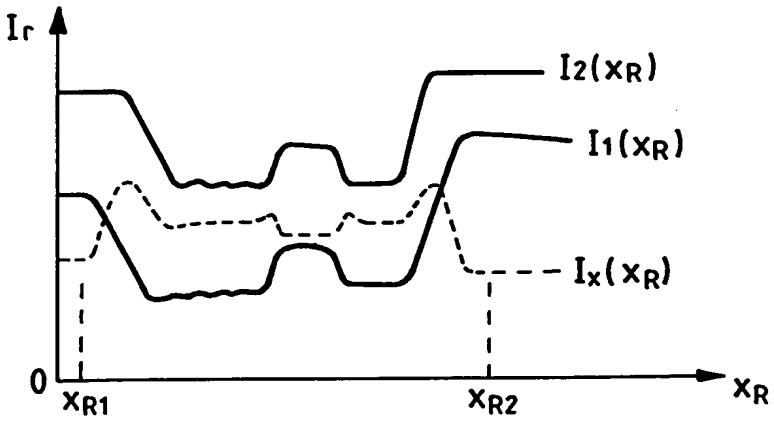


FIG. 7B

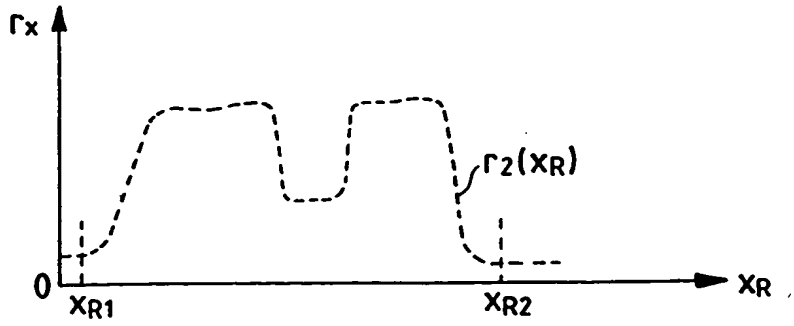


FIG. 8A

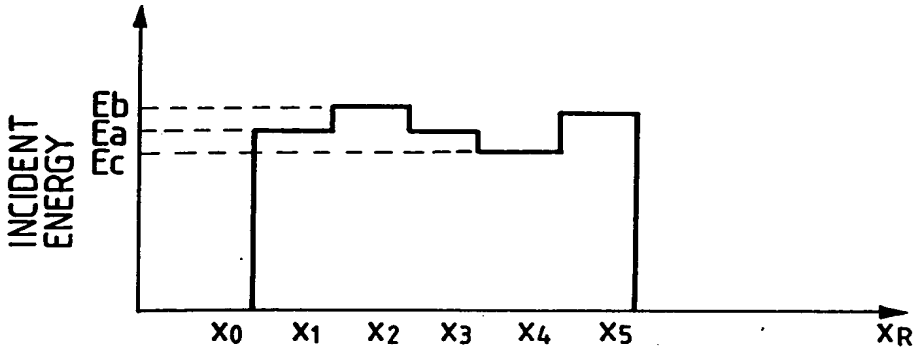

INCIDENT ENERGY
Eb
Ea
Ec
X0
X1
X2
X3
X4
X5
XR

FIG. 8B

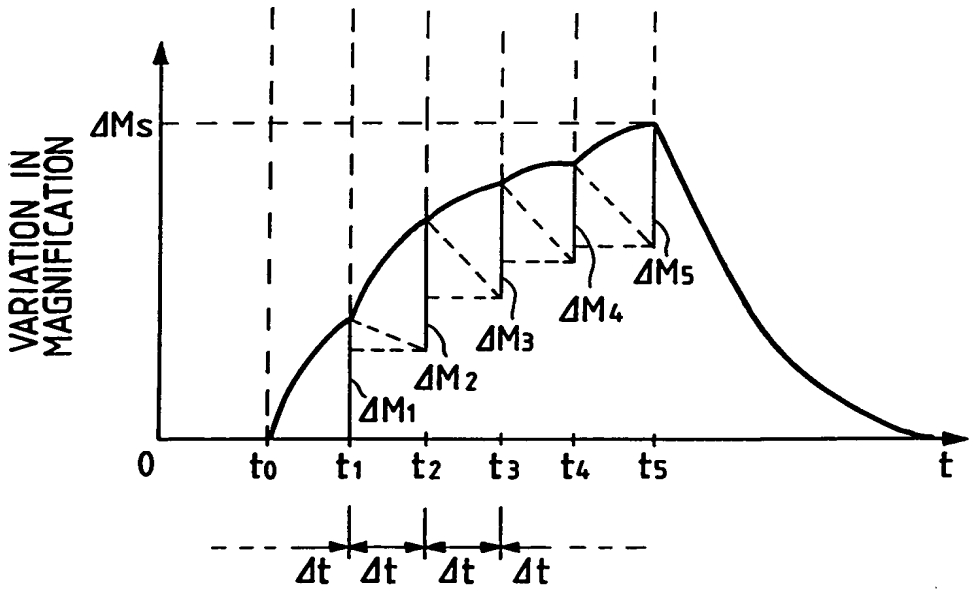

VARIATION IN MAGNIFICATION
ΔMs
ΔM1
ΔM2
ΔM3
ΔM4
ΔM5
0
t0
t1
t2
t3
t4
t5
t
Δt
Δt
Δt
Δt

FIG. 9

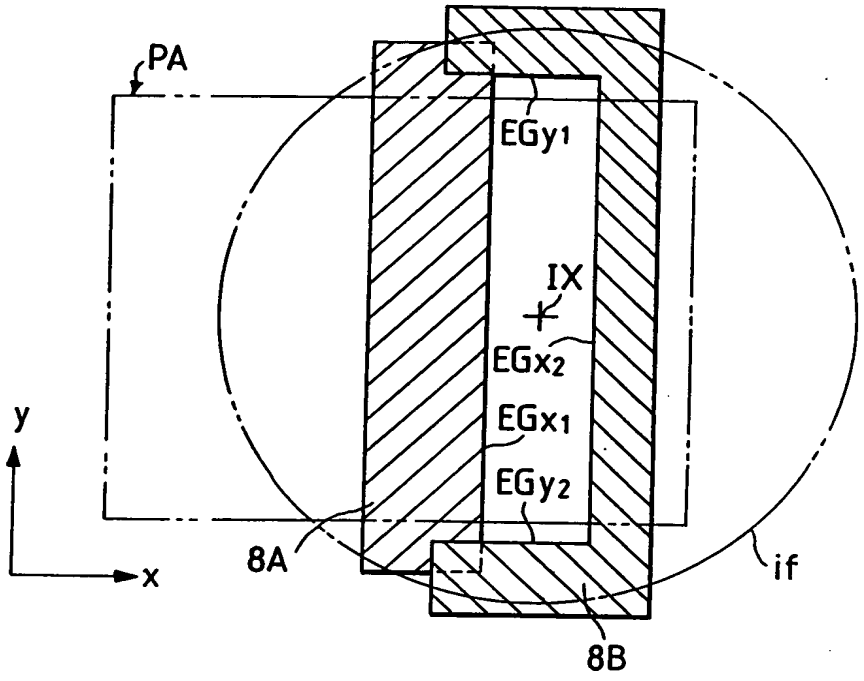
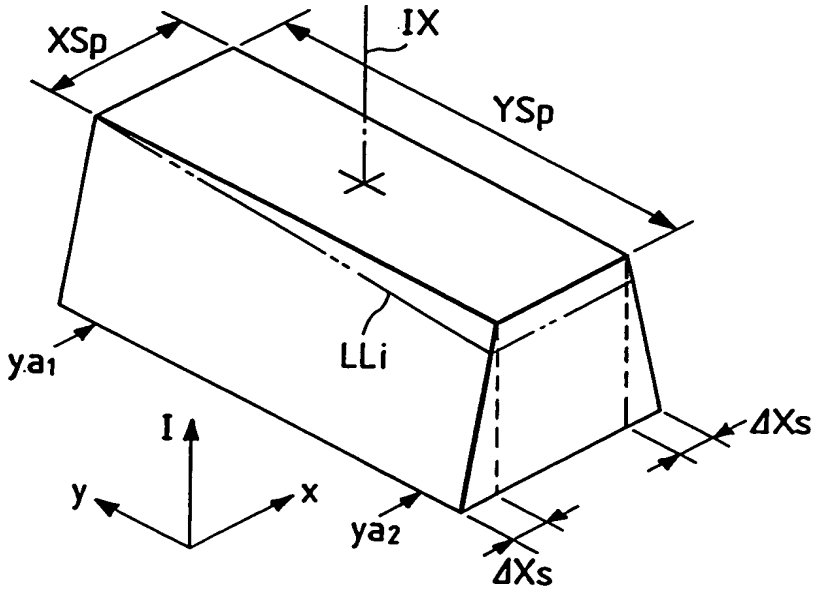

PA
EGy1
IX
EGx2
EGx1
EGy2
y
x
8A
if
8B

FIG. 10


XSp
IX
YSp
ya1
LLi
I
y
x
ΔXs
ya2
ΔXs

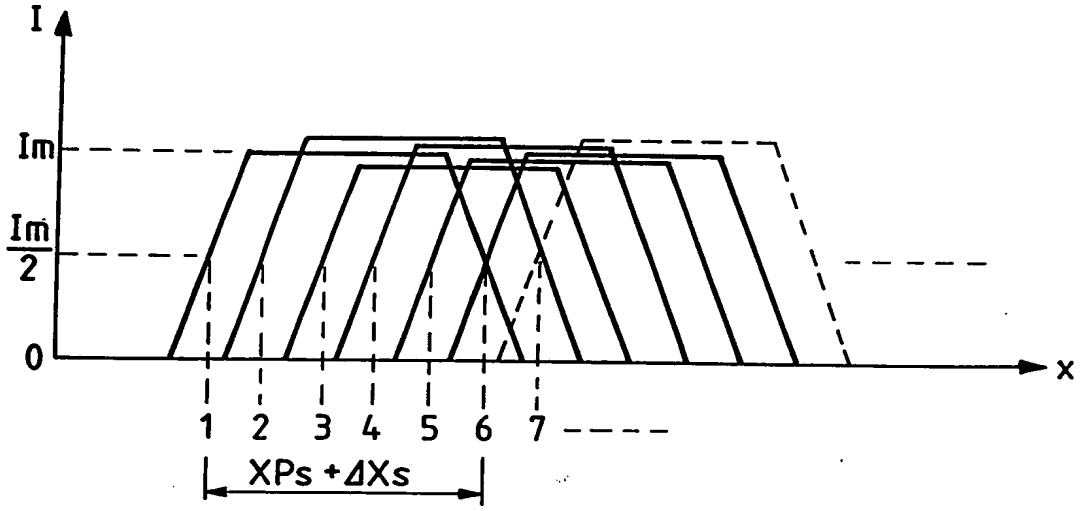



FIG. 11